

**IN THE CLAIMS:**

1. (Currently Amended) A computer implemented method of scheduling execution of a plurality of activities including the steps of:

estimating a duration of a new instance of each activity to be scheduled as a function of a measured duration of completed instances of the activity executed previously, and

adjusting the estimated duration according to the value of at least one attribute of the new instance of the ~~activity~~ activity;

wherein the step of adjusting the estimated duration includes:

inducting a pattern model partitioning the completed instances of the activity into a plurality of classes according to the value of at least one corresponding attribute, each class defining an adjustment factor;

assigning the new instance of the activity to a corresponding class

applying the pattern model; and

calculating the adjusted estimated duration multiplying the estimated duration by the adjustment factor of the class assigned to the new instance of the activity.

2. (Canceled)

3. (Currently Amended) The method according to claim 1 ~~[[2]]~~, wherein the pattern model is represented by a decision tree having at least one decision node specifying an attribute test and a plurality of leaf nodes each one specifying a corresponding class.

4. (Original) The method according to claim 3, further including the steps of executing the new instance of the activity, and selectively rebuilding the decision tree or revising the decision tree according to an actual duration of the executed new instance of the activity when a prediction error for the executed new instance of the activity reaches a threshold value.

5. (Currently Amended) The method according to claim 1 ~~[[2]]~~, wherein the adjustment factors are set to a series of values from 0.1 to 10.
6. (Original) The method according to claim 5 wherein the adjustment factors are spaced in a non-uniform manner, a difference between two consecutive adjustment factors increasing with the value of the corresponding adjustment factors.
7. (Original) The method according to claim 1, wherein the at least one attribute of the new instance of the activity includes an indication of a planned time of execution and the at least one corresponding attribute of each completed instance of the activity includes an actual time of execution.
8. (Original) The method according to claim 1, wherein the activities consist of jobs of a batch processing.
9. (Currently Amended) A computer program ~~directly loadable into~~ in a working memory of a ~~computer~~ computer, said program for performing the method of claim 1 when the program is run on the computer.
10. (Original) A program product comprising a computer readable medium on which the program of claim 9 is stored.
11. (Currently Amended) A system for scheduling execution of a plurality of ~~activities including activities, said system implemented in a data processing system, and including:~~
  - means for estimating a duration of a new instance of each activity to be scheduled as a function of a measured duration of completed instances of the activity executed previously; and
  - means for adjusting the estimated duration according to the value of at least one attribute of the new instance of the ~~activity~~ activity;

wherein the means for adjusting the estimated duration is further adapted to:  
induct a pattern model partitioning the completed instances of the activity  
into a plurality of classes according to the value of at least one  
corresponding attribute, each class defining an adjustment factor;  
assign the new instance of the activity to a corresponding class applying  
the pattern model; and  
calculate the adjusted estimated duration multiplying the estimated  
duration by the adjustment factor of the class assigned to the new  
instance of the activity.

12. (Currently Amended) A system for scheduling execution of a plurality of activities including activities, said system implemented in a data processing system, and including:

a first software module for estimating a duration of a new instance of each activity to be scheduled as a function of a measured duration of completed instances of the activity executed previously, and  
a second software module for adjusting the estimated duration according to the value of at least one attribute of the new instance of the activity; activity;  
wherein the second software module is further adapted to:

induct a pattern model partitioning the completed instances of the activity  
into a plurality of classes according to the value of at least one  
corresponding attribute, each class defining an adjustment factor;  
assign the new instance of the activity to a corresponding class applying  
the pattern model; and  
calculate the adjusted estimated duration multiplying the estimated  
duration by the adjustment factor of the class assigned to the new  
instance of the activity.

13. (New) The system according to claim 12, wherein the pattern model is represented by a decision tree having at least one decision node specifying an attribute test and a plurality of leaf nodes each one specifying a corresponding class.

14. (New) The system according to claim 13, further including a third software module for executing the new instance of the activity, and selectively rebuilding the decision tree or revising the decision tree according to an actual duration of the executed new instance of the activity when a prediction error for the executed new instance of the activity reaches a threshold value.
15. (New) The system according to claim 12, wherein the adjustment factors are set to a series of values from 0.1 to 10.
16. (New) The system according to claim 15 wherein the adjustment factors are spaced in a non-uniform manner, a difference between two consecutive adjustment factors increasing with the value of the corresponding adjustment factors.
17. (New) The system according to claim 12, wherein the at least one attribute of the new instance of the activity includes an indication of a planned time of execution and the at least one corresponding attribute of each completed instance of the activity includes an actual time of execution.
18. (New) The system according to claim 12, wherein the activities consist of jobs of a batch processing.
19. (New) The computer program according to claim 9, wherein the pattern model is represented by a decision tree having at least one decision node specifying an attribute test and a plurality of leaf nodes each one specifying a corresponding class.
20. (New) The computer program according to claim 9, wherein the method of claim 1 further includes the step of executing the new instance of the activity, and selectively rebuilding the decision tree or revising the decision tree according to an actual duration of the executed new instance of the activity when a prediction error for the executed new instance of the activity reaches a threshold value.